

Claims

1. An electric motor (1) comprising a casing (2) in which there is a stator and a rotor (3) mounted on a shaft (4), the casing (2) comprising a cup-shaped part (5) and a lid (6) connected to one another with removable connecting devices, and  
5 a static seal (7) inserted between the cup-shaped part (5) and the lid (6), the electric motor being characterised in that the seal (7) comprises retaining means (8) so that it remains applied to one of the elements, either the lid (6) or the cup-shaped part (5).

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2. The electric motor (1) according to claim 1, characterised in that the seal (7) is an O-ring seal positioned in a seat (10) in the lid (6) or in the cup-shaped part (5).

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3. The electric motor (1) according to claim 1 or 2, characterised in that the seal (7) retaining means (8) are rings (11) connected to the seal (7) by sections (12).

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4. The electric motor (1) according to any of the foregoing claims, characterised in that the seal (7) retaining means (8) operate in conjunction with fixing means (9) present in the lid (6) or in the cup-shaped part (5).

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5. The electric motor (1) according to claim 4, characterised in that the fixing means (9) are pins (15) which have a diameter slightly larger than that of the ring (11) internal hole, so that the ring adheres to the pin (15) thanks to the elasticity of the material used to make the ring (11).

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6. The electric motor (1) according to claim 4, characterised in that the fixing means (9) are pins (15) which have a truncated cone profile or a circumferential cavity with a diameter slightly larger than that of the ring (11) internal hole, so that the ring adheres to the pin (15) thanks to the elasticity of the material used to make the ring (11).

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7. The electric motor (1) according to claim 4, characterised in that the rings (11) are close to the devices connecting the cup-shaped part (5) and the lid (6), the latter respectively having protrusions (13, 14) in which the connecting devices, the rings (11) and the pins (15) are located.

8. The electric motor (1) according to any of the foregoing claims, characterised in that the rings (11) are integral with the seal (7) and are made of the same elastomeric material.

9. The electric motor (1) according to any of the foregoing claims, characterised in that the rings (11) are connected to the seal (7) by sections (12) and the rings (11) and the sections (12) are made with a diameter (d) smaller than, or are thinner than, the diameter or the thickness (D) of the seal 7, so that they do not interfere with seal 7 compression.

10. A method for assembly of the casing (2) of an electric motor (1), the casing (2) comprising a cup-shaped part (5) and a lid (6), comprising the steps of inserting an O-ring seal(7) in a seat (10) in the lid (6) or in the cup-shaped part (5), the O-ring seal (7) having retaining rings (11); inserting each retaining ring (11) on a respective fixing pin (15) present in the lid (6) or in the cup-shaped part (5), so that the seal (7) remains positioned in the seat (10) applied to one of the elements, either the lid (6) or the cup-shaped part (5); fitting the components (3) inside the casing (2); and connecting the lid (6) to the cup-shaped part (5).

11. The electric motor and method for assembly of the motor according to the foregoing claims, as described and illustrated with reference to the accompanying drawings and for the above-mentioned aims.